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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,014	05/10/2001	Peter Schafer	A34196 PCT USA-A	5113

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EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 03/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/853,014	Applicant(s) SCHAFFER ET AL.	
	Examiner Melody M. Burch	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/26/04 has been entered.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 17-19 and 22-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claims 17 and 22. The phrase "said second control signals" first claimed in lines 3-4 lacks proper antecedent basis. Only "a first control signal" and "second signals" were previously claimed.

The remaining claims are indefinite due to their dependency from one of claims 17 and 22.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6149248 to Lubbers et al. in view of JP-10138796 (JP'796) (using US RE37,513 to Tabata et al. as an English equivalent).

Re: claims 1-4. Lubbers et al. disclose a method for controlling a brake system of a vehicle wherein braking effect on the vehicle wheels is a function of brake pedal force exerted by the operator as shown in figure 5, the braking effect being enhanced by an adjustable braking force booster as shown in figure 5, the method comprising: detecting dynamics of vehicle movement or detecting vehicle deceleration by way of an accelerometer or wheel speed sensor as disclosed in col. 9 lines 51-53, analyzing the dynamics or the deceleration to detect a condition of vehicle instability, particularly, whether the deceleration rate is too low as disclosed in col. 10 lines 10-11, and increasing a force boosting effect of the braking force booster when the analysis indicates vehicle instability as disclosed in col. 10 lines 10-15.

Lubbers et al. lack the limitation of the vehicle instability specifically being in the form of a risk of swerving or skidding of the vehicle. Although Lubber et al. include a detection of whether a deceleration rate is too low, Lubbers et al. is silent as to whether the deceleration rate of the vehicle is too low during cornering or turning maneuvers – a situation which results in a reduction of turning stability and a risk of swerving.

Tabata et al. teach in col. 11 lines 39-49 the use of a detection and control of vehicle instability specifically in the form of a risk of swerving (which includes a reduction of turning stability as taught in col. 11 line 40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the vehicle instability of Lubbers et al. to have included a risk of swerving, as taught by Tabata et al., in order to provide vehicle stability specifically during cornering or turning maneuvers as taught by Tabata et al. in col. 11 lines 48-49.

Re: claims 5 and 17. Lubbers et al., as modified, describe the step of monitoring via measured pedal force to detect a condition wherein the operator may apply full braking and increasing the force boosting effect of the braking force booster when the monitoring indicates a condition wherein the operator may apply full braking as disclosed in col. 10 lines 33-36 and as shown in figure 5 of Lubbers et al.

Re: claims 12-16. Lubbers et al. show in figures 1 and 5 a braking system for a vehicle comprising: a brake pedal 4 for operation by a vehicle operator for applying braking force, a braking force booster 10 for increasing the braking force, the booster providing a first normal braking force F pedal shown in figure 1 as a function of force applied to the brake pedal when the deceleration is not too low as inferred by the disclosure in col. 10 lines 10-11 and in col. 10 lines 10-15 and being responsive to a supplied control signal 212 shown in figure 5 to change the normal braking force as a function of (the deceleration DECEL which is a function of) force applied to the brake pedal, and a processor 238 responsive to supplied signals DECEL representing dynamics of vehicle movement, the processor being programmed to analyze the dynamics and provide the control signal to the booster to cause the booster to change braking force when the dynamics indicate vehicle instability.

Lubbers et al. lack the limitation of the vehicle instability specifically being in the form of a risk of swerving or skidding of the vehicle. Although Lubber et al. include a detection of whether a deceleration rate is too low, Lubbers et al. is silent as to whether the deceleration rate of the vehicle is too low during cornering or turning maneuvers – a situation which results in a reduction of turning stability and a risk of swerving.

Tabata et al. teach in col. 11 lines 39-49 the use of a detection and control of vehicle instability specifically in the form of a risk of swerving (which includes a reduction of turning stability as taught in col. 11 line 40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the vehicle instability of Lubbers et al. to have included a risk of swerving, as taught by Tabata et al., in order to provide vehicle stability specifically during cornering or turning maneuvers as taught by Tabata et al. in col. 11 lines 48-49.

6. Claims 6, 7, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubbers et al. in view of JP'796 as applied to claims 5 and 17 above, and further in view of US Patent 4146108 to Sato.

Lubbers et al., as modified, teach monitoring the operator's use of a pedal, as set forth above, but do not disclose the limitation of the pedal being an accelerator.

Sato teaches the use of a braking system involving the step of monitoring the operator's use of or more specifically the abrupt release of an accelerator pedal as disclosed in lines 1-2 of the abstract. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of controlling

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the brake system of Lubbers et al., as modified, to have included a step of monitoring the operator's abrupt release of the accelerator pedal, as taught by Sato, in order to provide an alternate means of determining the operator's intentions of applying brakes.

7. Claims 8, 9, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubbers et al. in view of JP'796 and US Patent 4658939 to Kircher et al.

Re: claims 8, 20, and 21. Lubbers et al. disclose a method for controlling a brake system of a vehicle wherein braking effect on the vehicle wheels is a function of brake pedal force exerted by the operator as shown in figure 5, the braking effect being enhanced by an adjustable braking force booster as shown in figure 5, the method comprising: detecting dynamics of the vehicle movement or detecting vehicle deceleration by way of an accelerometer or wheel speed sensor as disclosed in col. 9 lines 51-53, analyzing the dynamics or the deceleration to detect a condition of vehicle instability, particularly, whether the deceleration rate is too low as disclosed in col. 10 lines 10-11, and in response to the detection of vehicle instability operating the brake system to effect a braking condition, but do not specifically disclose the limitation of the vehicle instability specifically being in the form of a risk of swerving or skidding and do not disclose at least one clamping device responsive to an actuator for applying the braking force to the vehicle.

Tabata et al. teach in col. 11 lines 39-49 the use of a detection and control of vehicle instability specifically in the form of a risk of swerving (which includes a reduction of turning stability as taught in col. 11 line 40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the vehicle instability of Lubbers et al. to have included a risk of swerving, as taught by Tabata et al., in order to provide vehicle stability specifically during cornering or turning maneuvers as taught by Tabata et al. in col. 11 lines 48-49.

Kircher et al. teach in figure 1 the use of at least one clamping device or disc brake 1-4 responsive to an actuator M which as taught in col. 4 lines 20-23 presses the brake shoes of the disc brake from either side against a brake disc rotating on a wheel. It is maintained that such pressing action inherently overcomes free play of the clamping device or disc brake. Also, although not disclosed, it is obvious that in order for the method of controlling the braking system of Lubbers et al. to function, there must be an associated well-known brake structure such as a disc brake or drum brake associated with the system. Despite the silence of the inventors of the Lubbers et al. reference with respect to the specific brake structure associated with the system, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake structure associated with the brake system of Lubbers et al., to have included a clamping device or disc brake responsive to an actuator, as taught by Kircher et al., in order to provide a means of realizing the braking effect of the brake system.

Re: claim 9 and 22. Lubbers et al., as modified, describe the step of monitoring via measured pedal force to detect a condition wherein the operator may apply full braking and increasing the force boosting effect of the braking force booster when the

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monitoring indicates a condition wherein the operator may apply full braking as disclosed in col. 10 lines 33-36 and as shown in figure 5 of Lubbers et al.

8. Claims 10, 11, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubbers et al. in view of JP'796 and Kircher et al. as applied to claims 9 and 22 above, and further in view of Sato.

Lubbers et al., as modified, teach monitoring the operator's use of a pedal, as set forth above, but do not disclose the limitation of the pedal being an accelerator.

Sato teaches the use of monitoring the operator's use of or more specifically the abrupt release of an accelerator pedal as disclosed in lines 1-2 of the abstract. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of controlling the brake system of Lubbers et al., as modified, to have included a step of monitoring the operator's abrupt release of the accelerator pedal, as taught by Sato, in order to provide an alternate means of determining the operator's intentions of applying brakes under unstable vehicle conditions.

Response to Arguments

9. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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March 25, 2004

Melody M. Burch
3/25/04